

Remarks:

Claims 1-25 are pending in the application. Claims 1-25 are rejected. Claims 3-6 are canceled. New claim 26 is added. Claims 1, 7, 8, 9, 10, 16, and 17 are amended. In view of the above amendments and the following remarks, applicant requests reconsideration of the rejected claims under 37 C.F.R. § 1.111.

Objections to the Specification

The Office action notes that the trademark MYLAR has been noted in the application at page 2, line 30, and that such trademark should be capitalized and be accompanied by the generic terminology. Applicant has amended the specification to capitalize the trademark MYLAR and to utilize the trademark appropriately. In view of the above amendments, applicant requests the withdrawal of the objection to the specification.

Rejections under 35 U.S.C. § 102

Claims 1-7 are rejected under 35 U.S.C. § 102(a) as being anticipated by Niimura et al. (U.S. Patent no. 6,203,137); claims 1-7 also are rejected under 35 U.S.C. § 102(b) as being anticipated by Niimura et al. (European patent appl. no. 0841175). The cited references appear to be related, and thus are referred to collectively as the Niimura et al. references.

The Niimura et al. references disclose a waste ink tank provided with an ink coagulating agent that includes a metal salt. Neither reference discloses a reservoir for a waste ink that includes a precipitating agent that is a multivalent organic acid.

Applicant has amended claim 1 to specify that the precipitating agent is a multivalent organic acid, has canceled claims 3-6, and has amended claim 7 to provide an appropriate claim dependency. In view of the above amendments,

applicant requests withdrawal of the rejections of claims 1, 2 and 7 under 35 U.S.C. § 102.

Rejections under 35 U.S.C. § 103

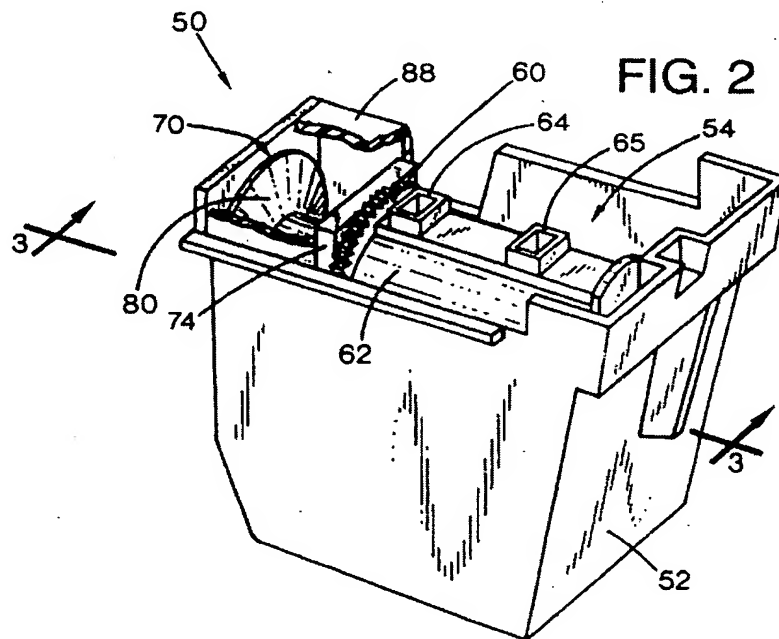
Claims 1-11, 15, 16, 17, 18, 19, 21, and 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Niimura et al. (either reference) in view of Osborne et al. (U.S. Patent no. 5,614,930). Applicant traverses the rejection.

With respect to claims 1, 2, and 7, the Niimura et al. references disclose a waste ink tank provided with an ink coagulating agent that includes a metal salt, but fails to disclose a coagulating agent that includes a multivalent organic acid. Osborne et al. discloses an inkjet printer service station that may include a spittoon to receive ink purged from the inkjet printheads. Osborne et al. fails to disclose an ink coagulating agent within the spittoon. In particular, the spittoon disclosed by Osborne et al. does not require an added coagulating agent, as “when both black and color inks are deposited in the spittoon 70, once mixed, these inks instantly coagulate into a gel” (at col. 8, lines 43-45).

Neither Niimura et al. nor Osborne et al. discloses a spittoon that includes a precipitating agent that is a multivalent organic acid. Further, there is no incentive to combine Niimura et al. and Osborne et al., as the inks of Osborne et al. are selected to coagulate when mixed, and therefore an additional coagulating agent (as described by Niimura et al.) is unnecessary. The applicant therefore suggests that the Office action has failed to establish the *prima facie* obviousness of claims 1, 2, and 7, as amended, as the cited references fail to disclose each and every limitation in the claims, and no motivation or suggestion is provided to combine the references.

With respect to claims 8-11, 15, 16, 17, 18 and 19, the Office action indicates that while the Niimura et al. references fail to disclose a spittoon having an inwardly extending lip at the top edge of at least one wall to contain the waste ink within the spittoon, Osborne et al. shows a spittoon having such an inwardly extending lip. The Examiner thus asserts that it would have been obvious to one of ordinary skill in the art to use the spittoon taught by Osborne et al. in place of the one in Niimura et al. to contain the waste ink within the spittoon. Applicant respectfully disagrees, and asserts that the Office action fails to establish the *prima facie* obviousness of the claimed invention.

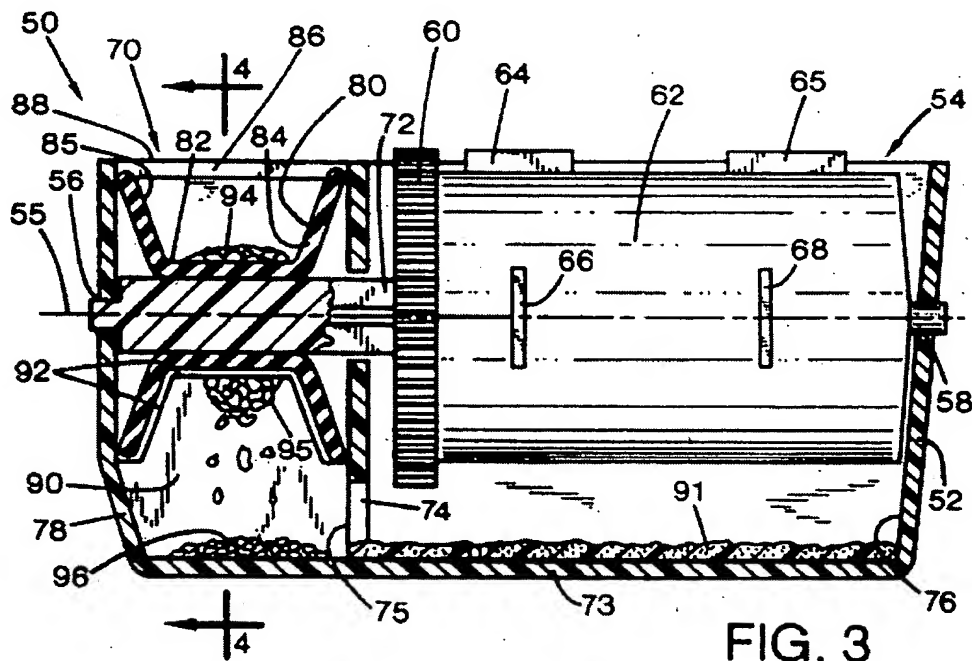
Osborne et al. discloses a service station for an inkjet printhead, as shown in Fig. 2 from Osborne et al. below:



As shown in Fig. 2, the disclosed service station may include a spittoon 70, that includes an annular trough 80, that receives ink purged from the inkjet printheads through an opening that is partially defined by an upper wall or lid 88.

✓ However, upper wall 88 is not an inwardly extending lip within the meaning of claims 8 and 17. In particular, waste ink may not be contained within the waste ink reservoir even when the spittoon is tilted toward the lip. For example, upper wall 88 may be pivoted at a hinge, as shown in Figs. 4 and 5 of Osborne et al. An upper wall attached by a hinge may not form the same barrier to leakage as a unitary lip when the spittoon is tilted. However, even where upper wall 88 extends from the side wall without a hinge, applicant notes that the spittoon of Osborne et al. may not retain waste ink in the same manner as the proposed lid.

As shown in Fig. 3, below, the frame structure 52 of the service station of Osborne et al. has a bottom wall 73 and an intermediate wall 74 that separates the service station into a spittoon chamber 75 and a main servicing chamber 76.



As shown in Fig. 3, wall 74 includes an aperture at the base of the wall that permits waste ink to flow into the main servicing chamber. Shown extending into the

aperture is a liquid absorbent diaper 91, that serves to absorb residual liquid from the waste ink deposited into the spittoon. If a substantial amount of liquid ink were to be present in the spittoon of Osborne et al., it would also be present in the servicing chamber. Tilting the spittoon toward upper wall 88 would therefore result in the waste ink from the spittoon being spilled from the service station. Neither of the cited references therefore disclose each and every element of the rejected claims.

Additionally, there is no motivation or suggestion to combine the Niimura et al. references with Osborne et al. As discussed above, the Niimura et al. references discloses a waste ink tank that includes a coagulating agent. The spittoon of Niimura et al. would therefore not contain liquid ink, and would not require an inwardly extending lip configured to retain ink within the spittoon. Similarly, also as discussed above, the inks used by Osborne are formulated to coagulate into a gel when mixed, and that any residual ink may be absorbed by diaper 91 (see col. 8, lines 43-47 of Osborne et al.). As neither Niimura et al. nor Osborne et al. disclose spittoons that contain liquid waste ink, neither reference provides a suggestion or motivation to modify Niimura et al. using the service station of Osborne et al. in order to retain waste ink.

With respect to claim 21, applicant notes that neither the Niimura et al. references, nor Osborne et al., either singly or in combination, suggest an inkjet printing mechanism as recited by claim 21. In particular, none of the cited references, singly or in combination, teach an inkjet printing mechanism that includes a means for retaining waste ink within a spittoon when the inkjet printing mechanism is tilted at an angle of up to 45 degrees. As discussed above, while the Office action has identified upper wall 88 of Osborne et al. as a means for retaining ink, applicant

has shown that the construction of the service station of Osborne et al. would permit waste ink collected within the spittoon to spill from the service station if the inkjet printing mechanism were tilted.

Similarly, with respect to claim 22, applicant notes that neither the Niimura et al. references, nor Osborne et al., either singly or in combination, suggest a method of utilizing a spittoon in an inkjet printing mechanism, as recited by claim 22. In particular, none of the cited references disclose removing a spittoon that includes a supply of waste ink from an inkjet printing mechanism, such that the spittoon is tilted but the waste ink is retained within the spittoon.

With respect to claims 15, 16, and 21, the Office action suggests that configuring the length of the inwardly extending lip so that the lip retains a predetermined volume of waste ink when the spittoon is tilted toward the lip at an angle is a design matter which is clearly within the skill of a person in the art. Applicant respectfully disagrees, and suggests that as there is no teaching in the cited references to prepare a spittoon having an inwardly extending lip to retain waste ink, the references fail to provide one of ordinary skill an incentive to design a spittoon capable of retained a specified volume of waste ink. Further, the design of such a spittoon must necessarily require the consideration of other factors, including overall compatibility with the inkjet printing mechanism utilizing such a spittoon, both in the ability of the user to access the spittoon, and in the ability of the printing mechanism to spit waste ink into the spittoon without obstruction. Applicant therefore respectfully requests that a reference be cited supporting the assertion in the Office action that configuring the spittoon of claims 15, 16, and 21 is "a design matter which is clearly within the skill of a person in the art."

Applicant asserts that the cited references, even in combination, fail to disclose each and every element of the rejected claims. In addition, applicant asserts that there is no teaching or suggestion in the cited references to modify the disclosures in order to obtain the claimed invention. As discussed above, the Niimura et al. references the use of a precipitating agent to solidify waste ink. Osborne et al. discloses a printer service station that includes a roller 80 that collects discharged ink to be removed by a scraper 90. As disclosed by Osborne et al. at col. 8, lines 56 to col. 9, line 6, "this accumulated ink 94 will dry and fall from the scraper to form piles of dried ink solids 96 at the bottom of the spittoon chamber 75." In addition, any residual moisture present in the printer service station is absorbed by diaper 91. Osborne et al. provides no motivation to retain a volume of waste ink within a spittoon when tilted, because Osborne et al. is configured to collect and retain dried ink solids.

As stated above, the applicant believes that the Niimura et al. and Osborne et al. references fail to render the claimed invention obvious. However, the applicant has amended claims 8 and 17 in order to more particularly highlight selected aspects of the invention. In particular, claims 8 and 17 are amended to recite that the inwardly extending lip is configured to retain a volume of waste ink when the spittoon is tilted toward the lip. Applicant asserts that neither the Niimura et al. references nor Osborne et al. disclose a spittoon that includes an inwardly extending lip that is so configured.

Additionally, claim 8 is amended to remove the recited feature of a precipitating agent within the reservoir, which feature is now recited in dependent

claim 26. In addition, the applicant takes this opportunity to amend claim 16 to more properly depend from claim 8.

In view of the above amendments and remarks, applicant asserts that the Office action has failed to establish the *prima facie* obviousness of claims 1-11, and 15-19, 21, and 22-25 in view of Niimura et al. and Osborne et al.

Claims 12-14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Niimura et al. (either reference) in view of Taylor et al. (U.S. Patent No. 5,742,303).

As discussed above, the Niimura et al. references disclose a waste ink tank provided with an ink coagulating agent that includes a metal salt. The Office action indicates that while the Niimura et al. references fails to disclose a spittoon having a retractable lid, Taylor et al. discloses such a spittoon, and that it would have been obvious to one of ordinary skill in the art to use a spittoon as taught by Taylor et al. in place of the one in the Niimura et al. references to contain the waste ink within the spittoon. Applicant traverses the rejection.

Taylor et al. discloses ink spittoons having door mechanisms, where the door mechanisms “confine airborne ink aerosol satellites within the spittoon after purging.” That is, the spittoons of Taylor et al. minimize the mess associated with spraying waste ink into the spittoon. The door mechanisms of Taylor et al. are not specifically intended to retain waste ink within the spittoon. As shown below in Figs. 3-6 of Taylor et al., none of the door mechanisms of Taylor et al. include “an inwardly extending lip at the top edge of at least one wall configured to retain a volume of waste ink when the spittoon is tilted toward the lip” as recited in amended claim 8.

edge of at least one wall of the spittoon, and neither spittoon is configured to retain a volume of waste ink when the spittoon is tilted toward the lip. The cited references, singly or in combination, fail to disclose each and every element of the rejected claims.

Additionally, applicant asserts that there is no suggestion or motivation in the cited references to combine or modify the disclosures in order to obtain the claimed invention. As discussed above, the Niimura et al. references the use of a precipitating agent to solidify waste ink, while Taylor et al. discloses ink spittoons having door mechanisms to confine airborne ink aerosol satellites. There is no suggestion in Niimura et al. that ink aerosols are a problem when using the disclosed waste ink tank. In fact, the waste ink tank of Niimura et al. includes a cover 21 including a waste ink lead-in port 22 that would appear to be at least as effective as the door mechanisms of Taylor et al. at suppressing ink aerosols. Nor is there any suggestion in Taylor et al. that there is a need to add the coagulating agents of Niimura et al. to the spittoons of Taylor et al.

Neither the Niimura et al. references nor Taylor et al., either singly or in combination, suggest or disclose a spittoon as set out in claim 8, as amended. Further, the references provide no motivation or suggestion to modify the references as suggested by the Office action. Applicant therefore suggests that the references fail to establish the *prima facie* obviousness of claims 12-14, which depend from claim 8 and include all the limitations of that claim.

Claim 20 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Niimura et al. (either reference) in view of Osborne et al., and further in view of Taylor et al. applicant traverses the rejection.

The Office action indicates that it would have been obvious to one of ordinary skill in the art to modify the combination of the Niimura et al. references and Osborne et al. with the teaching of Taylor et al. to provide a lid for the spittoon. As discussed above, applicant has shown that even in combination, the Niimura et al. references, Osborne et al., nor Taylor et al. all fail to disclose a spittoon having a lip that extends inwardly from at least one wall configured to retain a volume of waste ink when the spittoon is tilted toward the lip. Therefore, the cited references, even in combination, fail to establish the *prima facie* obviousness of claim 20, as it depends from claim 17, as amended.

In view of the above amendments and arguments, applicant requests the withdrawal of the rejection of claims 1-25 under 35 U.S.C. § 103.

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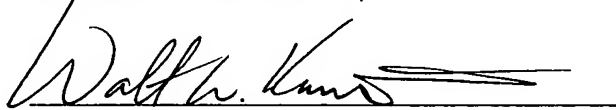
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The above amendments and remarks are believed to address fully the Examiner's rejections, and place the application in condition for allowance. A prompt indication of the same respectfully is requested. The Examiner is encouraged to telephone the undersigned if any issues remain that may be resolved by a telephonic interview.

Respectfully submitted,

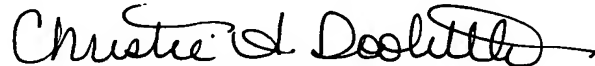
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